



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Application of:**

Chang Yul Cha

**Filed:** 09/15/00

**Serial No.** 09/662,663

**Title:** Process for Microwave Destruction of Harmful Agents and Waste

Art Unit No. 1741

Examiner:

E. Wong

Commissioner of Patents and Trademarks  
Washington, DC 20231

Dear Sir:

Attorney Docket No. 270

**AMENDMENT**

In response to the Office Action dated January 16, 2004 please note the following amendment of the above-identified U.S. patent application:

*In the Specification:*

**Page 1, lines 4-7;** delete the paragraph and replace with the following:

This application is a continuation-in-part of application Serial Number 09/662,663, filed September 15, 2000, and issued as U.S. Patent 6,419,799, whose specification is hereby incorporated by reference, and this is itself a continuation-in-part of Serial Number 09/249,966, filed February 12, 1999, and issued as U.S. Patent 6,045,663.

**Page 7, line 25;** add a -- . - (period) after the word "waste."

*In the Claims:*

All claims follow in the revised amendment style format.

1. (currently amended) A process for microwave destruction of solid harmful contaminated waste comprising:

compacting said waste on a platform, wherein said platform contains a carbonaceous substance;

radiating said platform with microwaves to produce pyrolysis of said waste;

collecting vapors from said pyrolysis with a purge gas; and

treating said purge gas with microwaves while passing through an oxidation catalyst bed energized with a carbonaceous substance, wherein said purge gas exit temperature does not exceed 300 °F.

2. (currently amended) The process according to claim 1 wherein said harmful contaminated waste further comprises being selected from the group of ~~harmful wastes~~ consisting of chemical agents, biological agents, and medical waste.
3. (original) The process according to claim 1 wherein all carbonaceous substances further comprise being selected from the group consisting of activated carbon, char, soot, pyrolytic carbon, activated charcoal, metal carbides, and combinations thereof.
4. (original) The process according to claim 1 wherein said purge gas further comprises significant oxygen in order to enhance pyrolysis.
5. (original) The process according to claim 1 wherein said oxidation catalyst bed energized with a carbonaceous substance further comprises being selected from the group consisting of silicon carbide pellets mixed with oxidation catalyst particles, oxidation catalyst particles with a substrate impregnated with silicon carbide, and oxidation catalyst particles deposited over a center of silicon carbide.
6. (new) The process according to claim 1 wherein said microwaves further comprise being radiated upon said platform from above.
7. (new) A process for microwave destruction of solid harmful contaminated waste comprising:
  - compacting said waste on a platform, wherein said platform contains silicon carbide;
  - radiating from above said platform with microwaves to produce pyrolysis of said waste;
  - collecting vapors from said pyrolysis with an oxygen containing purge gas; and
  - performing microwave catalysis while passing said purge gas through an oxidation catalyst, wherein said purge gas exit temperature does not exceed 300 °F.
8. (new) The process according to claim 7 wherein said harmful contaminated waste further comprises being selected from the group consisting of chemical agents, biological agents, and medical waste.
9. (new) The process according to claim 7 wherein said microwave catalysis further comprises being selected from the group consisting of silicon carbide pellets mixed with oxidation catalyst particles, oxidation catalyst particles with a substrate impregnated with silicon carbide, and oxidation catalyst particles deposited over a center of silicon carbide.